WHAT IS CLAIMED IS:

1. A weather-resistant lock apparatus comprising a lock core device that includes a lock shell and a lock core unit, said lock core unit including

an inner shell received in and rotatable relative to said lock shell,

a plural+ity of locking plates received in and rotatable relative to said inner shell, said locking plates cooperating to form a keyhole of said lock core unit,

a first locking unit operably associated with said locking plates for locking said inner shell against rotation relative to said lock shell in a locking state of said locking plates, and for unlocking said inner shell for rotation relative to said lock shell in an unlocking state of said locking plates,

a latch actuator coupled to said inner shell, and

a plurality of spacer plates, each of which is disposed between an adjacent pair of said locking plates,

wherein said spacer plates are made of a material with a hardness less than that of said locking plates.

2. The weather-resistant lock apparatus as claimed in Claim 1, wherein said lock core unit further includes a drive plate received in and rotatable relative to said inner shell, said drive plate being disposed between said locking plates and said latch actuator and

cooperating with said locking plates to form said keyhole, said drive plate being capable of transmitting a rotary force applied through a correct key that was inserted into said keyhole to said latch actuator.

3. The weather-resistant lock apparatus as claimed in Claim 2, wherein said drive plate is formed with a non-circular drive hole that forms a part of said keyhole, said lock core unit further including a rotation control member mounted on said latch actuator and registered with said drive hole, said rotation control member extending into and engaging said drive plate in said drive hole to prohibit rotation of said drive plate, and being movable to disengage from said drive plate when the correct key is inserted into said keyhole so as to permit rotation of said drive plate with the correct key in order to drive rotation of said latch actuator.

4. The weather-resistant lock apparatus as claimed in Claim 3, wherein said latch actuator has a coupling portion connected to said inner shell, said coupling portion being formed with a cavity for receiving said rotation control member therein, said latch actuator further having a sleeve member mounted fittingly in said cavity, said sleeve member having a fan-shaped end wall, said rotation control member extending through said end wall, said drive plate being formed with a drive projection for engaging said end wall of said sleeve

member so as to transmit rotation of said drive plate to said latch actuator.

5. The weather-resistant lock apparatus as claimed in Claim 4, wherein said rotation control member includes a control pin that extends through said end wall for engaging said drive plate in said drive hole, and a spring for biasing said control pin to extend into said drive hole.

6. The weather-resistant lock apparatus as claimed in Claim 5, wherein said control pin is formed with an axially extending slot therealong, said inner shell being provided with a retaining pin that extends through said coupling portion of said latch actuator and through said slot in said control pin, thereby limiting axial movement of said control pin.

7. The weather-resistant lock apparatus as claimed in Claim 2, wherein said lock core unit further includes a second locking unit operably associated with said drive plate for locking said inner shell against rotation relative to said lock shell in a locking state of said drive plate, and for unlocking said inner shell for rotation relative to said lock shell in an unlocking state of said drive plate.

8. The weather-resistant lock apparatus as claimed in Claim 1, wherein said spacer plates are made of tetrafluoroethylene polymer.

9. The weather-resistant lock apparatus as claimed in

Claim 1, further comprising a padlock body that includes:

a padlock housing formed with a core chamber, and having a bottom portion formed with an opening for access into said core chamber, said lock core device being received in said core chamber, said padlock housing further having a top portion formed with two shackle holes; and

a shackle member having two insert ends that are inserted into said shackle holes, respectively.

10. The weather-resistant lock apparatus as claimed in Claim 9, wherein said padlock body further includes a latch unit disposed in said padlock housing and coupled to said latch actuator for engaging at least one of said insert ends of said shackle member.

11. The weather-resistant lock apparatus as claimed in Claim 9, wherein said padlock body further includes two seal rings, each of which is retained in a respective one of said shackle holes for establishing airtight contact with a respective one of said insert ends of said shackle member.

12. The weather-resistant lock apparatus as claimed in Claim 9, wherein said lock shell has an end face accessible at said opening in said bottom portion of said padlock housing and formed with a key access hole registered with said keyhole.

13. The weather-resistant lock apparatus as claimed in

Claim 12, wherein said end face of said lock shell projects outwardly of said opening in said bottom portion of said padlock housing, and is formed with a beveled periphery.

14. The weather-resistant lock apparatus as claimed in Claim 12, wherein said lock shell has a peripheral surface fitted with a seal member for establishing watertight contact with said bottom portion of said padlock housing at said opening.

15. The weather-resistant lock apparatus as claimed in Claim 12, wherein said lock core unit further includes a sealing member adjacent to said key access hole, said sealing member including a sealing ring fitted in said inner shell, and a protective sleeve made of tetrafluoroethylene polymer, said protective sleeve being fitted in said lock shell and being formed with an annular skirt that extends into and that is in sleeved engagement with said sealing ring.

16. The weather-resistant lock apparatus as claimed in Claim 9, wherein said lock core device is removable from said core chamber through said opening in said bottom portion of said padlock housing, said padlock body further including a securing member disposed in said padlock housing, said securing member including a threaded rod mounted threadedly in said padlock housing and capable of being tightened so as to abut against said lock core device and retain said lock core device

in said core chamber, said threaded rod being capable of being loosened to permit removal of said lock core device from said core chamber through said opening in said bottom portion of said padlock housing.

17. The weather-resistant lock apparatus as claimed in Claim 16, wherein said padlock housing is formed with an aperture that is aligned with said threaded rod, said padlock body further including a plug for closing said aperture.

18. The weather-resistant lock apparatus as claimed in Claim 9, wherein said lock core device is removable from said core chamber through said opening in said bottom portion of said padlock housing, said padlock body further including a securing block disposed in said padlock housing at an inner end of one of said shackle holes and movable toward and away from said core chamber in a direction transverse to said one of said shackle holes, said securing block having a curved guiding surface, one of said insert ends of said shackle member abutting against said curved guiding surface to tighten said securing block against said lock core device so as to retain said lock core device in said core chamber.

19. The weather-resistant lock apparatus as claimed in Claim 18, wherein said lock shell is formed with an insert groove, and said securing block has a protruding portion for engaging said insert groove.

20. The weather-resistant lock apparatus as claimed in

Claim 9, wherein said lock core device is removable from said core chamber through said opening in said bottom portion of said padlock housing, said padlock body further including a protective block disposed in one of said shackle holes and abutting against said lock core device, said protective block being removable through said opening in said bottom portion of said padlock housing after removal of said lock core device from said core chamber.

21. The weather-resistant lock apparatus as claimed in Claim 20, wherein said protective block is formed with a fastener hole registered with said one of said shackle holes, said padlock housing being formed with a threaded hole registered with said fastener hole, said padlock body further including a screw inserted through said fastener hole and threadedly engaging said threaded hole so as to mount removably said protective block in said padlock housing.

22. The weather-resistant lock apparatus as claimed in Claim 21, wherein said fastener hole in said protective block has a size sufficient to receive one of said insert ends of said shackle member.

23. The weather-resistant lock apparatus as claimed in Claim 9, wherein said lock core device is removable from said core chamber through said opening in said bottom portion of said padlock housing, said padlock body further including a shackle retainer mounted in said

padlock housing adjacent to one of said shackle holes, said shackle retainer engaging one of said insert ends of said shackle member to prevent removal of said shackle member from said padlock housing, said shackle retainer being removable from said padlock housing through said opening in said bottom portion of said padlock housing to permit removal of said shackle member from said padlock housing after removal of said lock core device from said core chamber.